



A*STAR Institute of Microelectronics and UMC to Develop TSV Technology for BSI Image Sensor Used in Mobile Applications

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A*STAR Institute of Microelectronics (IME) and United Microelectronics Corporation (NYSE: UMC; TWSE: 2303), a leading global semiconductor foundry, have agreed to develop Through-Silicon Via (TSV) technology for backside illuminated CMOS image sensors (CIS). The resulting technology will substantially enhance performance, lower costs and shrink the size of multi-megapixel image sensors found in mobile applications such as smart phones, digital cameras and tablet personal computers.

Leveraging on IME's 300mm TSV line which features advanced capabilities in TSV wafer thinning, bonding, redistribution layer (RDL) and bumping, this project will develop a TSV process for integration with the CIS device. The evolution of CIS technology is driven by the need to maintain performance for ever-shrinking pixels, and Backside Illumination (BSI) is widely anticipated to be the enabling technology to achieve exceptional performance at micron-level pixel sizes. The project targets an improvement in sensitivity for smaller pixel image sensors capable of supporting higher performance applications, including next generation high resolution digital single-lens reflex (SLR) cameras and digital video recorders.

"IME continues to enjoy a successful partnership with UMC and remains committed to innovation and cutting-edge technology development to help UMC quickly capture new growth opportunities," commented Professor Dim-Lee Kwong, Executive Director of IME. "This collaboration with a world leading foundry such as UMC underscores our strategy to establish Singapore as an R&D hub for high value-added activities."

Po Wen Yen, Senior Vice President at UMC, added, "We are delighted to expand our relationship with IME for BSI technology using TSV. IME's capabilities and expertise in TSV integration will complement UMC's

successful efforts for via-middle and via-last TSV on standard 28nm CMOS, and will be a valuable asset to help us extend our market and technology leadership in CMOS image sensor. This partnership is further affirmation of UMC's confidence in growing its activities in Singapore.”

About UMC

UMC (NYSE: UMC, TWSE: 2303) is a leading global semiconductor foundry that provides advanced technology and manufacturing services for applications spanning every major sector of the IC industry. UMC's customer-driven foundry solutions allow chip designers to leverage the strength of the company's leading-edge processes, which include 28nm, mixed signal/RFCMOS, and a wide range of specialty technologies. Production is supported through 10 wafer manufacturing facilities that include two advanced 300mm fabs; Fab 12A in Taiwan and Singapore-based Fab 12i are both in volume production for a variety of customer products. The company employs over 13,000 people worldwide and has offices in Taiwan, Japan, Singapore, Europe, and the United States. UMC can be found on the web at <http://www.umc.com>.

About Institute of Microelectronics (IME)

The Institute of Microelectronics (IME) is a research institute of the Science and Engineering Research Council of the Agency for Science, Technology and Research (A*STAR). Positioned to bridge the R&D between academia and industry, IME's mission is to add value to Singapore's semiconductor industry by developing strategic competencies, innovative technologies and intellectual property; enabling enterprises to be technologically competitive; and cultivating a technology talent pool to inject new knowledge to the industry. Its key research areas are in integrated circuits design, advanced packaging, bioelectronics and medical devices, MEMS, nanoelectronics, and photonics. For more information, visit IME on the Internet: <http://www.ime.a-star.edu.sg>

About Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is the lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based and innovation-driven Singapore. A*STAR oversees 14 biomedical sciences, and physical sciences and engineering research institutes, and seven consortia & centre, which are located in Biopolis and Fusionopolis, as well as their immediate vicinity. A*STAR supports Singapore's key economic clusters by providing intellectual, human and

industrial capital to its partners in industry. It also supports extramural research in the universities, hospitals, research centres, and with other local and international partners.

Note From UMC Concerning Forward-Looking Statements

Some of the statements in the foregoing announcement are forward looking within the meaning of the U.S. Federal Securities laws, including statements about future outsourcing, wafer capacity, technologies, business relationships and market conditions. Investors are cautioned that actual events and results could differ materially from these statements as a result of a variety of factors, including conditions in the overall semiconductor market and economy; acceptance and demand for products from UMC; and technological and development risks. Further information concerning these risks is included in UMC's filings with the U.S. SEC, including on Form F-1, F-3, F-6 and 20-F, each as amended.

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